

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A face identification device comprising:

detection means for detecting face images from human body images taken by a camera;

storage means in which a face image of a criminal suspect is previously stored;

determination means for determining whether a face image detected by the detection means matches with the face image stored previously in the storage means by comparing both face images; and

abstraction means for applying an abstraction process to a face image of a non-criminal suspect out of the face images detected by the detection means in order to make the face image of the non-criminal suspect unrecognizable,

the abstraction means applying the abstraction process exclusively to a detected face image when the determination means determines that the detected face image is not a criminal suspect, and not applying the abstraction process to a detected face image when the determination means determines that the detected face image is a criminal suspect, wherein

when a face image is stored in the storage means subsequently, the abstraction means restores to the original human body images taken by the camera,

the detection means detects face images from the original human body images, and

the determination means determines whether a face image detected by the detection means matches with the face image stored subsequently in the storage means by comparing both face images and displays a determination result.

2. (Previously Presented) The face identification device according to claim 1, wherein said abstraction process is a mosaic process for making a face image portion mosaic.
3. (Previously Presented) The face identification device according to claim 1 or 2, wherein when said determination means determines that the detected face image is a criminal suspect, a detected face image is not applied with the abstraction process and is applied with a marker.
4. (Previously Presented) The face identification device according to claim 1 or 2 or 3, wherein when a face image detected by said detection means is determined to match with the face image stored in said storage means, the image of the criminal suspect which is not applied with the abstraction process on the face and remaining parts thereof and the images of people other than the criminal suspect which are applied with the abstraction process exclusively on the faces thereof are displayed, and a warning is also outputted.
5. (Currently Amended) A face identification method comprising the steps of:
 - detecting face images from human body images taken by a camera;
 - determining whether a detected face image matches with a previously stored face image of a criminal suspect by comparing both face images;
 - applying an abstraction process exclusively to a detected face image in order to make the detected face image unrecognizable, when it is determined that the detected face image is not a criminal suspect; and
 - not applying the abstraction process to the detected face image when it is determined that the detected face image is a criminal suspect;
 - when a face image is stored subsequently, restoring the original human body images taken by the camera;

detecting face images from the original human body images; and
determining whether a face image matches with the face image stored subsequently
by comparing both face images.

6. (Currently Amended) A face identification system comprising:

at least one video camera for acquiring images of people; and
a face identification device for comparing said acquired images with images of criminal suspects previously stored in said face identification device to determine whether at least one of said acquired images matches at least one of said stored images of criminal suspects, and if said face identification device determines that said match does not exist, changing said at least one of said acquired images to make said at least one of said acquired images unrecognizable, subsequently storing additional images of criminal suspects in said face identification device, changing said at least one of said acquired imaged to make said at least one of said acquired images recognizable again, and comparing said recognizable again image with said additional images of criminal suspects subsequently stored in said face identification device.

7. (Currently Amended) A face identification system comprising:

a computer;
image input circuitry that provides input images to the computer; and
previously stored face image data for a set of at least one registered face of a criminal suspect[;],

the computer executing a procedure that includes:

detecting a set of faces in an input image; and

for each face in the set of detected faces, comparing it with the previously stored face image data; and

if the face does not match any of the set of registered faces of criminal suspects, making the face unrecognizable in a version of the input image;

after another face image is subsequently stored, making the face recognizable again; and

comparing the another face image subsequently stored with the recognizable again face image.

8. (Previously Presented) The system of claim 7 in which the computer makes the face unrecognizable by applying a mosaic process.
9. (Previously Presented) The system of claim 7 in which the procedure further includes storing the version of the input image.
10. (Previously Presented) The system of claim 7 in which the input circuitry includes a digital camera.
11. (Previously Presented) The system of claim 7 in which the input circuitry includes a scanner.
12. (Currently Amended) A face identification system comprising:
 - a computer;
 - stored image version data for a version of an original image in which a face in the original image has been made unrecognizable; and
 - stored face image data for a registered face;

said computer executing a procedure that includes:

using the stored image version data to reconstruct the original image;

detecting a set of faces in the reconstructed original image; and

for each face in the set of detected faces, comparing the face with the stored face image data and if the face matches the stored face image data, providing an indication of a match,

wherein the stored face image data for a registered face is stored after the face in the original image has been made unrecognizable.

13. (Currently Amended) A face image detection method comprising:

detecting a set of faces in input image; and

for each face in the set of detected faces, comparing it with previously stored face image data and if the face does not match any of the set of stored image face data, making the face unrecognizable in a version of the input image; and

for each face in the set of detected faces, comparing it with subsequently stored face image data.

14. (Currently Amended) A face image detection method comprising:

reconstructing an original image using stored image version data, the stored image version data being for a version of the original image in which a face in the original image has been made unrecognizable;

detecting a set of faces in the reconstructed original image; and

for each face in the set of detected faces, comparing it with stored face image data and if the face matches a registered face, providing an indication of a match,

wherein the stored face image data is stored after the face in the original image has been made unrecognizable.

15. (Currently Amended) A face image detection method comprising:

detecting a set of faces in an input image, comparing each face in the set of detected faces with previously stored face image data; and

if the a face does not match any of the previously stored image face data, applying a mosaic process to make the face unrecognizable in a version of the image; and

if the face matches previously stored image face data, applying a marker to the face in the version of the image and providing a name of the matching stored image face data; and storing the version of the image;

when additional face image data is stored subsequently, reversing the mosaic process to make the face recognizable again; and

comparing the recognizable again face to the additional face image data to determine whether there is a match.